THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

NEW SERIES.] THURSDAY, AUGUST 5, 1869. [VOL. IV.—No. 1.

Original Communications.

OPTICS AND THE EYE, AS TAUGHT AT THE UNIVERSITIES.

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PROFESSOR E. H. Clarke, in his recent address to the graduating class of the Medical Department of Harvard University, told his hearers, that in their future relations to the community one of their duties would be to guide correctly, if they could not control, the study of anatomy and physiology as carried out in our schools and colleges. We agree with Prof. Clarke, that whatever may be our disbelief in the laity's being made familiar with medical subjects, we cannot prevent their present demand to become so, and thus the most we can do, is, as far as in our power, to see that untruths and mere theories are not taught instead of those accepted and proved laws of nature, the knowledge of which can do no harm.

Holding ourselves still to be students, we would follow out Dr. Clarke's suggestions in calling professional attention to the chapters on the eye and optical instruments to be found in the text books on physics, used at Harvard, Yale and Columbia. If our criticisms should seem severe, we would ask the reader to endeavor to study through the chapters here referred to. We have also good reason for saying that other portions of some of these text books are equally faulty.

Now first for our Alma Mater, Harvard. The text book on optics so long used there, is Lardner's; the very last edition of which has nearly one half the book devoted to the eye and optical instruments. If we had not seen and read, we could not have believed that any text book now used contained the inaccuracies, and we had almost said rubbish, which this book does. We have no idea of boring the reader by an enumeration of all the faults of commission and omission in these two hundred pages, but will pick out a few of the more glaring ones here and there. The wood-cut to exhibit the motor muscles of the eyeball is very poor, and in regard to the use of two of them, the *obliqui*, we are told "anatomists are not agreed." Following the old watch-glass idea the cornea fits into a hole in the sclerotic. The sections of the eye to exhibit the optic axes are outrageously bad. The choroid is wrongly described. The retina is said to be a continuation of the fibres of the optic nerve spread over the inside of the eye to near the margin of the frontal opening covered by the cornea. The ciliary processes are said to surround and support the lens, and then we have a section in which they are half the thickness of the lens from it. The pupil is said to be black because every part of the interior of the eye which could be visible through it is colored black. To match this statement and show its origin all mention of the ophthalmoscope is omitted among optical instruments. A membrane is said to line the anterior chamber running over the lens. The rest of the anatomical description is on a par with this.

The eyeball, we are told, can turn 60° inwards and 90° outwards, 150° together; 50° upwards and 70° downwards, 120° together. Such an eye must be in a "fine frenzy rolling," and artificially assisted, as the muscles cannot effect any such thing. Next we have two or three pages about the image on the retina, and a comparison of the visual organ to an optical instrument, all of which comes from no later date than the older researches and experiments of Brewster. We are told that pencils proceeding from all objects more distant from the eye than two or three feet may be regarded as consisting of parallel rays. On a par with this we have 10 pages about the accommodation of the eye, showing an utter ignorance of any modern experiments, and consequently simply perplexing, the truth being quite left out. Refraction is dismissed by calling some eyes weak-sighted or far-sighted, and others near-sighted. In one place the author talks about the retina feeling the image formed on the choroid. Page after page of theory and theoretical discussion are introduced which have no proper place in any work on optics, and seem only

brought in to swell the whole. Extraordinary statements are made in reference to ocular spectra. Sir David Brewster seems to be the basis for all. We are told it requires a great deal of practice to see after images, whilst the reverse would be nearer the truth. In speaking of continued impressions the author talks about these being dependent on the *intenseness* with which the eye has been *directed* to the visible object previous to its removal. Complementary colors are badly treated and pages quoted, where a few statements of the deduction arrived at would have answered much better. The bugbear of the inverted retinal images not making the world upside down is treated in the usual way. Projection not of course spoken of, or probably known. The blind spot in our field of vision is clumsily explained and exemplified. Some 15 pages devoted to monocular and binocular vision defy criticism. The author and editor seem to be quite ignorant of any distinction between seeing and perception, or to know that the latter is a mental act. Color blindness is very poorly introduced and explained, considering physicists have paid so much attention to this subject.

In the chapter on optical instruments, spectacles and their selection are talked about in a manner on a par with the rest of the subject. Although 116 pages are devoted to the theory and description of optical instruments, one of the most simple and beautiful, the ophthalmoscope, is omitted. This, too, 14 years after Helmholz invented it, in a book said to be brought up to the times in every respect, "co-extensive with the actual state of the sciences, according to the latest discoveries." The whole chapter on optical instruments is more like the advertising catalogue of an optician. If the publishers paid for the very numerous cuts, they enhanced the price but not the value of the book.

We do not propose to say anything here about other portions of this revised edition of Lardner's Optics now used at Harvard. We touch only that which is, so to speak, professional. If objection is made to its use as a text book, the reply might readily be made, Is there any other better in English? We can only say some others are *less bad*, because the portions devoted to the eye and optical instruments are shorter. We trust this criticism will have some effect in preventing the further use of Lardner's Optics at Cambridge. There is at the present day a great deal of truth known in regard to the eye and its relations to the laws of light, which can be readily comprehended by the student, and much which will help him in the care of his visual organs.

In Olmsted's Philosophy used at Yale we find 6 pages devoted to vision. In one sentence the eye is called a "camera obscura," and in the next "an assemblage of lenses." "The eye consists of *three* principal chambers," the author goes on to say, but he describes only *two*, the aqueous and vitreous. The aqueous "consists, in fact, chiefly of pure water"; a little further on, however, it and the vitreous "in consistency much resemble the white of an egg." There is a cut of a section of the human eye which is rather worse than those generally seen in text books; for this there is no sort of excuse. Even in a coarse wood-cut no larger than this, it is just as easy to represent the proportions and relative positions of the several parts correctly. This figure and one other of the thaumatrope, are the only ones given in the chapter on vision.

We are told, "back of the vitreous humor the retina lines the interior of the cavity up to the edge of the crystalline;" which is true in reference to this wood-cut, but of course not in nature. The ciliary muscle is omitted, and a curious little tag on one side represents the optic nerve. "The retina is a *net-like* expansion of nerve, on which the images are depicted for the purposes of vision; every fibre branches from the optic nerve." This is the same old stuff taken out of the many poor text books on the eye, and therefore, perhaps, excusable in the past, not, however, so now.

"Adaptation," or accommodation of the eye, is dismissed in a few words, showing utter ignorance of the method by which it takes place, so beautifully proved long ago by Helmholz, Donders and others. Two little wood-cuts will perfectly explain this so interesting, and now so simple point. Although Helmholz is so generally known as a physicist, yet scientific men and even professional physicists seem to ignore his perfect experiments on the accommodation and refraction of the eye.

The old bugbear of the image being inverted on the retina is treated in the usual way, namely, said to be of no importance, and then attacked with such erudite arguments as to leave the impression in the reader's mind that the author is not sure of them. The theory of projection to explain the inverted image is not referred to.

Refraction of the eye, so important for every student to understand, and so simple to explain, is dismissed in about half a page, headed "long-sightedness and short-

sightedness." It is useless to speak of it further than to say that accommodation is omitted in it, and no distinction made between presbyopia and hypermetropia.

The paragraph marked "direct and indirect vision," is particularly bad. The optic nerve where it enters the globe is called "a spot on the retina which is entirely destitute of sensibility."

These are only some of the sins of commission; the sins of omission are, of course, too numerous to mention. .The ophthalmoscope is not alluded to in the chapter on optical instruments.

The book to be used at Columbia College is "Ganot's Eléments de Physique," translated and edited by E. Atkinson, Ph.D., F.C.S., Professor of Experimental Science, Royal Military College. Sandhurst, 3d edition, July, 1868. In such a work as this we certainly should expect to find the chapters on the eye, and vision, and optical instruments, brought up to the latest knowledge on these subjects. On turning to the chapter on "The Eye considered as an Optical Instrument," the first thing we meet is a cut giving a section of the human eye, which is about as bad as any other we know of in its relative proportions, shape, &c. In describing the globe, the old watch-glass idea of the cornea is given, a little hesitatingly it is true. In speaking of the retina, the fact is not quite distinctly put that *it* alone *receives* and the optic nerve alone *transmits* to the brain the impression of objects. Inversion of images on the retina is not explained by *projection*, although other theories are mentioned. Two pages are devoted to the various exploded theories in reference to accommodation. The truth, as now mathematically proved, could be explained and illustrated in one fourth of the space. It seems almost impossible to conceive that such men as the author and translator should either ignore or be ignorant of the beautiful experimental researches of such a physicist as Helmholz. Eleven French, German and English physicists are quoted, but the truths established in the last decade not even alluded to. Donders and Helmholz are not mentioned. This, too, in July, 1868.

Passing over some unsatisfactory pages on binocular vision, the stereoscope, retinal impressions, accidental images, irradiation, &c., we come to a page on "short sight and long sight, myopy and presbytism," in which we are told that "short sight is the habitual accommodation of the eyes for a distance less than that of ordinary vision, so that persons affected in this way only see very near objects distinctly. The usual cause of short sight is a too great convexity of the cornea or of the crystalline." "The habitual contemplation of small objects, as when children are too much accustomed in reading and writing to place the paper close to their eyes, or working with a microscope, may produce short sight. It is common in the case of young people, but diminishes with age." "Long sight is the contrary of short sight"; "the cause is, that the eye is not sufficiently convergent." If this and the following paragraphs on spectacles had been left out, we would not have complained, but in view of Donders's and so many others' published researches on the refraction and accommodation of the eye, such notice of the subject in a text-book is simply disgraceful. The paragraph on diplopy is amusing. The one on color-blindness not so, for here was a point that any physicist should have put properly. A page and two cuts are devoted, for a wonder, to the ophthalmoscope. Of course, only the inverted image is spoken of, and Helmholz's original instrument is described as a "concave spherical reflector of glass or metal" Notice of the ophthalmoscope might almost as well have been entirely omitted, as in the other text-books on optics.

Prof. Rood, of Columbia College, informs us that he will use for the students in the School of Mines "Dr. Adolph Wüllner's Lehrbuch der Experimental Physik," 1862–66, in the original German in two volumes. In the second part of the first volume, page 816, we have a chapter headed "Von der Wahrnehmung des Lichtes," in which the anatomy and physiology of the eye is correctly given and fully but simply explained. The reason of this is that the whole is taken from the authors whose names are found referred to at the bottom of the page —Helmholz, Listing, Volkman, Plauteau, Fick, Ludwig, Meissner, Brücke, &c.

We would criticize but a point or two, which another edition will probably correct. The section of the human eye, page 817, is very much better than generally given. The retina, however, does not come far enough forward, and the ciliary muscle and iris are confused. P. 818. The lens is said to change its shape in accommodation by pressure of the ciliary processes on it. P. 831. Henke's mistaken notion of accommodation is given, which, as it is only theory, had better been left out in a text-book of experimental physics. The refraction of the eye is dismissed in a few lines, as if the

author was unacquainted at the time of writing with Donders's researches on emmetropia, myopia, hypermetropia and astigmatism. These can be easily explained, and should be correctly and simply described in every text book on optics.

DISLOCATION OF THE CRYSTALLINE LENS.

By C. K. Fiske, M.D., St. John, New Brunswick.

Thinking the following cases of some interest to the readers of the Journal, I offer them for publication.

In August, 1863, Mr. C., a young man, aged 24, consulted me in regard to a painful and diseased eye, which had received a severe blow some six years previously. On examining the eye, I found the iris of the left quite tremulous, the lens dislocated and floating about in the vitreous humor, which of course had been softened, and was then in a fluid condition; vision was totally extinct. While the patient remained in an erect position, the lens lay out of sight behind the iris, but on stooping forward and bringing the face downwards it would fall directly over the pupil; in fact, it would float in all directions, according to the position of the patient's head.

The right eye was sound and vision good, with the exception of weakness from the constant pain and irritation in the left eye.

Under these circumstances, I advised extraction of the diseased and floating lens, and on the 8th of the same month proceeded to remove it in the usual way, making a clean downward cut in the cornea, and by throwing the face forward succeeded in bringing the lens to the opening and extracting it.

On account of the fluidity of the vitreous humor the eye became a good deal collapsed, but by care as regards the position of the patient, and great restraint upon the motions of the eye and brow, the globe again filled within twenty-four hours, the cornea healed rapidly without deformity, and the pupil assumed its natural form, leaving the eye looking better than before the operation and more agreeable in appearance than an artificial one. The sound eye has grown much stronger, and is at the present date free from irritation.

The second case was that of an old woodsawyer, who called on me in the summer of 1864, with one eye completely destroyed by a powder blast and the other much injured by the same accident.

The left eye presented the following appearances:—Cornea sound and clear; the pupil much expanded, with highly tremulous iris; vision quite good while the patient was standing in an erect position, but when stooping forward the dislocated lens, covered by its capsule, would fall forward and completely block up the pupil, rendering the poor patient totally blind for the moment, or till, throwing the head back, it would as quickly disappear behind the iris, below the pupil, letting in the full light of day again, with vision good enough to follow his vocation.

I did not propose to extract the lens, for the reason that such an attempt would probably result in collapse of the eye and total loss of sight.

I have watched the case till the present time, and for several years the sight remained the same, enabling him to saw wood and keep out of the almshouse most of the time, till a few months ago he lost all useful vision by an attack of inflammation.

The third case is that of J. H., a stout, old Irishman, who called on me in February, 1865, for surgical treatment. Eight years previously he had received a severe blow in the left eye, which resulted in total blindness of the organ in a few days. On examining the injured eye, I found the crystalline lens dislocated, opaque, and lying within the pupil, adherent to and grasped by the iris, and it had been a source of much pain and irritation for several years, so much as to cause incipient cataract in the right eye.

With a view of relieving irritation and saving the sight of the right eye as long as possible, and with a faint hope of letting light into the injured organ, I proposed to remove the opaque lens from its position. Therefore, on the 30th of the following September, I broke up the adhesion of the lens, with a cataract needle, to the upper part of the pupillary margin of the iris, and depressed it backwards and downwards, letting in the light freely to the back chamber of the eye, but the patient felt no sense of light, as is usual in depressing a lens, and it was quite evident the functions of the retina had been destroyed effectually by the blow received years before. Wishing to place the lens away from contact with the iris, I broke up the lower adhesions and left it lying below the pupil, out of sight.

Very little irritation followed, and the eye became less irritable, the pupil assuming its natural form and size, but there is no vision to that eye.

The right eye is much more useful at the present date than at the time of the operation, four years ago, when he was led to my office by his daughter. I called to see him this morning, and found that vision had so improved as to enable him to receive and pay out money without assistance from any one.

June 11, 1869.

A CASE OF TOTAL, INSTANTANEOUS LOSS OF SIGHT OF RIGHT EYE.

By J. C. Manson, M.D., Pittsfield, Me.

Mrs. P., American, aged 19, of healthy parentage, good *physique* and sanguineous temperament, married about three months, presented herself for treatment May 2d, and stated that two days previously, at about 2 o'clock, P.M., while about her housework, a blur suddenly came over both eyes, lasting some two or three minutes; after rubbing the eyes with her fingers, the left became perfectly clear, but upon closing that eye, found that she could not distinguish a ray of light with the right eye; all was *perfectly* dark. There was no pain or unnatural sensation; nor had there been any up to the time when I saw her. No abnormal appearance presented itself upon examination—not the slightest degree of inflammation of any of the membranes or appendages—*pupil responded as readily to light as the other*. Tongue clean—bowels regular—appetite good. Her "courses" had been regular—was "unwell" about two weeks before with no unusual symptoms. I simply advised a shade to protect the eye from the strong rays of light, and as I could perceive no indication to be filled by medicine, I prescribed none, but requested her to present herself occasionally for examination; this she has done, and now, some eight weeks having elapsed, there seems to have been no change of symptoms since first examination, with this exception—she has *ceased* to *menstruate*. States that she has "*seen nothing*" since the time alluded to at the first examination. *That she is pregnant I have no doubt.*

Query—How much and in what way has pregnancy to do with loss of vision? Will the sight return? and if so, when? Any advice or suggestions from yourself or the readers of the Journal will be gratefully received.

[In connection with this case, it appears proper to quote from a recent work, the statement of its distinguished author upon the subject of congestive amblyopia.* "It may be due to over-fulness of the system and congestion of the eye, brain or other organs. It is not unfrequently met with in cases of suppression of customary discharges, deficiency or absence of the catamenia and insufficient action of the skin and kidneys." He also mentions two cases reported by Mr. Lawson; in the first of which (published in the *Medical Times and Gazette* for 1863) suppression of the menses produced, within a few days, complete amaurosis in one eye and great impairment of vision in the other. Under the use of iodide of potassium, and with the re-appearance of the catamenia, the sight was restored. In the second (Royal London Ophthalmic Hospital Reports, iv. 65) amaurosis repeatedly recurred during the period of gestation. H. H. A. B.]

CASE OF SYMPATHETIC OPHTHALMIA.

By Geo. W. Handy, M.D.

The following case of sympathetic ophthalmia is interesting, from the fact that certain symptoms usually considered prominent in this disease were absent.

J. C., blacksmith, æt. 40, applied May 14th and told the following story:—Thirteen weeks since, while working on hot iron, was struck in left eye by what he thought was a hot scale. A simple wash was used for the irritation. In a few days he was attacked with severe pain and swelling of the tissues about the eye. The pain kept him awake nights, and there was very little discharge. For the past two months there has been no pain nor irritation. The bulb is now in an atrophied condition.

Patient, for the past three days, has noticed that he could not see quite as distinctly with right, and yesterday was attacked with temporary blindness—"objects appeared for some time quite indistinct." Of course, the first suspicion would naturally be sympathetic ophthalmia, but one of the important symptoms mentioned by writers on this subject—viz.: tenderness on pressure in the ciliary region of either eye—was entirely absent. Neither was there intolerance of light or lachrymation. The right presented unmistakable but not deep ciliary injection. The iris was slightly discolored, sluggish, and had a single tag of adhesion to the lens. Ophthalmoscopic examination

* A Treatise on the Diseases of the Eye. By T. Soelberg Wells, Professor of Ophthalmology in King's College, London, &c. &c. 1869. Pp. 408.

revealed a slight haziness of the media. The acuteness of vision was diminished to two-fifths. Patient was advised to have the atrophied bulb immediately removed, and to use as a collyrium in right a solution of atropiæ sulph. gr. i., aquæ ℥ii., four times a day.

May 14.—Left enucleated in the ordinary manner, and the recovery, as usual in such cases, was rapid and complete. On section of the eye, the vitreous humor was found disorganized into a dark-colored liquid. The retina was collected in a firm cord which proceeded from the entrance of the optic nerve, and suggested the remains of the arteria centralis retinæ. The lens was much shrunken and adherent to the cornea. Immediately back of the lens and in contact with it was a large, firm mass of lymph, twice the size of a normal lens. In the anterior and inferior portion of this mass, near the ciliary processes, was found an irregular piece of steel about the size of a pin's head.

May 17.—Wound well healed, tag of adhesion in it torn away, and pupil fully dilated. Patient directed to continue the use of atropine daily, and keep eye protected from light.

Selected Papers.

"SWEET QUININE;" WHAT IS IT?

By William Procter, Jr.

We have been repeatedly asked the nature of the substance thrown into commerce by Mr. Frederick Stearns, under the name of "sweet quinine." In the March number of this journal, page 187, we gave a statement based solely upon the manufacturer's circular (not then having examined the article), from which we naturally inferred it to be the alkaloid quinia, associated with liquorice sugar. The following are the paragraphs: "Sweet quinine is as definite a chemical salt as the sulphate (or bitter) quinine—is made direct from the same source—Peruvian bark; has, like it, positive tonic and antiperiodic power." &c.

"In sweet quinine each atom of the alkaloid is enveloped in *glicion*, the sweet principle of liquorice, and it forms an aggregation of minute sugar-coated molecules of quinine." Nothing is said about any other alkaloid than quinia, and it is clearly intended that the reader should infer from the words used that the manufacturer's skill has succeeded in combining free quinine with glycyrrhizin in lieu of sulphuric acid, so as to mask its bitterness.

Having within a few days (June 28) had our suspicion excited, we determined to examine it, and have satisfied ourself that this so-called sweet quinine is no quinine at all, but mainly the alkaloid *cinchonia* precipitated from the sulphate, dried and triturated with an impure glycyrrhizin prepared from liquorice root. Cinchonia is very insoluble, requiring nearly 4000 parts of cold water, hence the tastelessness of "sweet quinine," and its bitterness with acid or alcoholic fluids which salify and dissolve it. The substance associated with it is nearly all removed by hot water, to which it gives a straw-color. It froths much by agitation, and has a power of suspending or emulsifying the finely powdered cinchonia. These statements are based on the following experiments:—*sweet quinine* laid on reddened litmus paper and touched with a drop of alcohol restores its blue tint immediately. The same occurs more slowly with a drop of water. It is almost wholly soluble in boiling alcohol in excess, yielding a light straw-colored alkaline solution. Treated with boiling water and well washed on a filter, it yields about 25 per cent. of its weight to that fluid, which acquires a straw color, froths much by agitation, is without bitterness, and not precipitated by sub-acetate of lead or alcohol. Weak iodine water gives a greenish color which soon fades, indicative of a trace of starch. Evaporated, this liquid deepens in color, and separates a dark film which remains insoluble. As the liquid concentrates its sweetness increases, and its taste is that of liquorice root. The residue insoluble in water was dried and treated with boiling alcohol, in which it dissolves, except some flocculent impurities of a dark color, probably derived from the liquorice root. The alcoholic solution precipitated crystals by cooling and by evaporation, on standing.

These crystals were soluble in dilute sulphuric acid, forming a crystalline salt, which, when dissolved in an excess of chlorine water, gave, on the addition of ammonia, a white precipitate, like that which cinchona produces, without the *slightest* trace of green to indicate quinia. When the salt was added to a solution of ferrocyanide of potassium (Dr. Bill's test for cinchonia), a yellow curdy precipitate fell, which by gently heating became crystalline on cooling. When the salt is dissolved in a little water in a test tube, and ether added followed by ammonia, and shaken,

the liquids separate and leave a whitish insoluble layer at their juncture. When treated by Herapath's test no indication of green Herapathite crystals was obtained but the brown precipitate, followed on standing by the dense, almost black crystals usual with cinchonia. There can be no doubt, from these results, that "sweet quinine" consists of about three parts of cinchonia and one of impure glycyrrhizin. Quite possibly there may be some cinchonidin also present, in small quantity, but no examination has been made for it. To what extent the glycyrrhizin acts as an acid towards the cinchonia we do not know, but its well-known affinity for bases renders it quite possible that such a relation might exist, though we incline to believe the union to be mechanical by trituration, as stated by the circular. We confess to being surprised at this result, when viewed in connection with the circular of Mr. Stearns. The *morale* of the affair is doubtful—cinchonia, however tasteless, is not quinine, nor does its commercial value approach that of quinine so nearly as it is made to do in the garb of "sweet quinine." When physicians want cinchonia they can get it by prescription, and it is not in accordance with our ideas of fair dealing to serve it up as a new substance.—*American Journal of Pharmacy.*

FATAL CASE OF TETANUS RESULTING FROM THE REMOVAL OF TEN TEETH FROM THE UPPER JAW WHILE UNDER THE INFLUENCE OF NITROUS OXIDE GAS.

By H. K. Steele, M.D., Dayton, Ohio.

J. E. P., aged 19, of strong constitution, robust and in full health, on the 1st of March last, while under the influence of nitrous oxide gas, administered by a dentist, had ten of the upper teeth removed, for the purpose of having a full artificial set inserted.

He felt some of the pain of the operation, but was well able to endure it and recovered, apparently, from its effects, and continued at his occupation, that of farming. On the 7th of March a twitching of the lower lid of the right eye, with a tendency in it to "draw down," was observed by himself and friends. On the 8th he applied to the dentist for relief, who made an external application of chloroform, deeming that sufficient. The left eye, however, became similarly affected, and other symptoms were gradually manifested until the 14th, at which time I first saw him (the distance from the city—7 miles—being, probably, a reason why I was not sooner called). There was then inability to separate the jaws more than three quarters of an inch, a spastic contraction of the masseter. There was retraction of the angles of the mouth, and an occasional clonic spasm of the muscles of the abdomen.

Under the influence of a cathartic, with full doses of belladonna and bromide of potassa, and ice-bags to the spine, two or three hours's sleep was obtained that night; without, however, relaxation of the jaws, or entire subsidence of the abdominal spasm. On the morning of the 15th there was a perceptible exaggeration of the symptoms, the spasms of the abdominal muscles at times being very painful, a drop of water falling on the chin or running down the neck, producing the spasms in their full force. Deglutition performed with some difficulty.

Chloroform, by inhalation, moderated the pain and gave temporary comfort. Atropia was substituted for the belladonna and cannabis indica for the potass. bromide, with morphine to be given at night.

March 16th.—Had slept two hours during the night after taking the morphine, but a continuance of it did not maintain relief. This morning the disease is aggravated. He cannot remain in bed, and occasionally has to be raised to the standing position—the spasms affecting all the muscles of the body, that of the extensors predominating.

From this time onward the disease increased in severity; the thoracic muscles, those controlling the respiration, being more affected than the others. There was at no time opisthotonos or emprosthotonos, but the body was powerfully extended to a straight position. He was not able to remain in bed during the last two days, and it was only whilst there was relaxation of the spasms that he could sit in a chair; the *rest of the time he was held on his feet, and required the doors and windows to be kept open*, which, in the very inclement weather, was an aggravation to his disease and precluded all hopes of affording him relief. He died on the 19th, almost in a standing position, having just sunk down exhausted by the violence of a spasm.

The treatment may be summed us as follows:—Ice-bags to spine; morphine; chloroform by inhalation; cannabis indica; bromide of potassium; belladonna; atropia;

extract of calabar bean by hypodermic injection, one third of a grain in solution, and one grain per ore. The remedies affording the most relief are in the order in which they are named.

Chloroform, for the last two days, affected the respiration dangerously. The hypodermic application of calabar bean was not in the least beneficial.

Dr. Jno. Davis, of Dayton, saw the case with me the last three days.—*Cincinnati Lancet and Observer.*

Reports of Medical Societies.

NORFOLK DISTRICT MED. SOCIETY OF MASSACHUSETTS. REPORTED BY WM. H. CAMPBELL, M.D., OF ROXBURY.

A REGULAR quarterly meeting of the Norfolk District Medical Society was held at Roxbury, July 14th, 1869, at 11, A.M., the President, Dr. Cotting, in the chair.

The records of the preceding meeting were read by the Secretary, Dr. Jarvis, and accepted.

After which the subject for discussion—*Croup and its Treatment*—was taken up.

Dr. Jarvis, of Dorchester, introduced the subject by reading a short paper, in which he showed that until comparatively recently this disease had been confounded in mortuary statistics with other throat diseases, so that little can be gathered as to its frequency in various localities from what has been recorded. He spoke of the influence of climate, and gave as the result of reports of mortality that it was less fatal in our Northern and Southern than in the Middle States. A sea-side residence seemed to have no influence. He earnestly deprecated the old methods and all kinds of lowering treatment, adding that he believed that the system of management of the disease had fortunately completely changed in modern times from the perturbating course of former years.

Dr. Little, of Jamaica Plain, followed with an interesting *résumé* of the various opinions concerning croup and its treatment advanced by the various authorities, and favored the later views on the subject.

Dr. Martin, of Roxbury, spoke only of treatment. He thought much harm had been done by confounding this disease with diphtheria. There was a great tendency in the parts about the throat to inflammatory conditions, with exudation, in the course of many diseases, and a proper distinction should be made. If croup was early treated by emetics and baths, he thought it might be treated with success, but in the later stages emetics did more harm than good. He thought it might be arrested in the commencement of the attack, from the fact that those who are in good circumstances and have better attention and earlier treatment have less *membranous* croup than the poor and squalid, among whom he had had his worst cases of this disease. As the disease advanced, emetics and lowering measures were not of service. Leeches to the throat might be useful. He spoke of the immunity of "croupy" children from this croup, and thought that the reason of the immunity was that means were applied early. In very severe cases, he advises large doses of calomel (gr. i.–iss.) every two hours, so as to rapidly affect the system—and thinks he has seen great advantage derived from the use of this drug. He believes it to be the only agent we have that is of use in the advanced stages. He related his experience in the operation of tracheotomy; his actual success had not been great, but he was in favor of the operation, if for nothing more than the immediate relief. It also gave another chance to the patient in croup; not so, however, in diphtheria, which seemed to be a blood disease. He advocated the operation without the tube, merely fastening the lips of the wound apart by a wire attached to little horseshoe shaped plates, specimens of which he exhibited. He thought there was one party of physicians who operate too often, and another who were too much opposed to the operation, but that there was a mean in which the truth lay. It was a simple operation, and would do no harm if it was not successful.

Dr. Mann, Sr., of Roxbury, had no confidence in any kind of treatment in severe cases. Very severe cases would sometimes get well, and other cases would die, even after the expulsion of the membrane.

Dr. Wood, from the Sandwich Islands, present by invitation, said the disease was seldom or never seen there. He never saw a case there. The climate, he said, was moist, temperate, with little variation, the thermometer ranging from 60° to 80° Fahr.

Dr. Bacon, of Sharon, spoke in favor of the calomel treatment, and thought he had seen spasmodic croup relieved by bleeding. He opened the jugular vein in a case and took a pint of blood, and the patient rallied, although apparently dying before the blood was drawn.

Dr. Amory, of Brookline, spoke of the inhalation of the vapor of the sulphide of mercury as having been tried in Europe with success. It acts by softening the membrane, and Dr. A. thought an emetic might be of service after the inhalation, in assisting to remove the *débris*. Dr. A. asked those who had spoken of tracheotomy if the membrane extending below the bifurcation of the trachea would not be a contra-indication to the operation.

Dr. Martin said that in the only case of his that recovered the membrane did not extend so far, and he did not think the operation would be successful if it did.

Dr. Seaverns, of Roxbury, thought it would be impossible to know how far the membrane extended, before an operation, for there was so much difficulty in the respiration that the exact condition of the lungs and bronchiæ could not be made out.

Dr. Cushing, of Dorchester, had operated five times, with one recovery. Some had recovered under use of the laryngeal syringe. He reported a case actively treated at the commencement with calomel, with continued increase of severity, which afterwards improved with the syringe, &c., to recovery. He spoke also in favor of operating without the tube. He thought croup was never a constitutional disease, and became fatal always by causing suffocation, and the operation of tracheotomy the most likely thing to give relief. The aim should be to keep up the supply of air, and encourage respiration by keeping the air moist. Opium should be given to relieve the spasm which is present, and wine, &c., for support; but no treatment will shorten the disease—it will run its course. Tracheotomy ought to be performed whether the case is to recover by it or not, as it relieves at the time and may prolong life.

Dr. Burgess, of Dedham, said there was very little true croup in Dedham; he thought it possible for false croup, so called, to run into true croup.

Dr. Mann, Sr., spoke of its occurring in certain families, and also thought one disease to run into the other.

Dr. Cushing thought these distinct diseases, as much so as variola and any other eruptive disease. Where one disease seemed to change to the other, perhaps there was a mistake in diagnosis in the first instance.

Remarks were also made by Drs. Fogg, of South Dedham, Arnold, of Roxbury, and others, and by Dr. Putnam, President of the State Society, present by invitation.

The President, in concluding the discussion, said that by appointment he had given the results of his observations on real cases to the Society, and they were published in the Boston Medical and Surgical Journal, Sept. 22, 1859. Since then he had not seen reasons to greatly alter the opinions there expressed. To him the disease appeared sui generis, as much so as measles, small-pox, &c.—sometimes accompanying or following, but never the resultant of other diseases. The membrane by which it is characterized is peculiar, and being vital, is not to be produced artificially. In "diphtheria," so called, there is rather exudation, or sloughing, or both. He thought there was reason for considering croup a constitutional disease, probably with incubation—the strong local demonstration being principally lethific on account of the parts affected. He had seen death early in the disease when no severe obstructions in respiration had occurred, and when *post mortem* revealed only thin membrane and an open larynx. He considered it self-limited, capable of recovery under all kinds of treatment; and without treatment—relating a case in point. He had known well the old treatment, "the enormous polypharmacy of modern times," having been brought up in it, but had labored hard in assisting to bring about the improvements of the present day. It had been no easy task, yet so effectively done that now-a-days young practitioners receive without mistrust, even as common-places, and unhesitatingly avow principles and practice which but a very short time ago it was heresy to enunciate, and which have been established only through much resistance, misrepresentation and detraction. He admitted that any of the methods, or drugs, advocated, might possibly be useful in particular cases, but the treatment should be directed to the individual's condition, nature guiding, rather than to the title of the disease. Anodynes, vapor, and sustaining measures he thought best in most cases. He would not, however, hesitate to try anything that could reasonably be expected to prolong life, or, as Trousseau said, to "hinder from dying," until the disease could reach its limitation. In this view he resorted to tracheotomy; which, however, should not be performed without full recognition of its dangers, immediate and remote. He had seen a patient, in the hands of the most skilful, die upon the table from the operation solely. The suggestions of members to-day of omitting the tubes he thought timely, as tubes in themselves are an obstruction not to be disregarded. More than twenty

years ago he had operated satisfactorily without tubes, as taught by Lisfranc and others a quarter of a century before. Our observations should be unprejudiced, rigid, and the results frankly and fearlessly stated. In the course of the present discussion he had been reminded of Velpeau's answer to Leverrier in the Academy of Sciences, an answer worthy of constant remembrance. "Many affections yield without treatment, and, it must be acknowledged, sometimes in spite of all treatment. To this fact we must not be wilfully blind. * * * After the exhibition of a remedy, the symptoms have yielded once, twice, thrice, or oftener; hence, it is inferred that the cure has been in consequence of the treatment. The inference is a natural one, but almost invariably incorrect."

After the close of the discussion and the transaction of some business of an unimportant character, the Society adjourned, at 3, P.M., to partake of a collation at the house of the President.

Bibliographical Notices.

Circular No. 2. A Report on Excisions of the Head of the Femur for Gunshot Injury. War Department. Surgeon General's Office, Washington. Government Printing Office, 1869. 4to. Pp. 141.

Of the circulars issued from the Surgeon General's Office, this conveys to the reader more than any of its predecessors a vivid idea of the valuable statistical material accumulated in the surgical archives of the Government.

The liberality with which the Public Medical Documents have been distributed, assures those interested in the subject that they will ere long have an opportunity of personally examining this interesting trophy of the industry and zeal of Dr. George A. Otis [Brevet Lieutenant Colonel and Assistant Surgeon, U.S.A.], in the patient and persevering investigation of Hospital Registers and surgical literature. Having been favored with advance sheets, a brief analysis of the contents of this circular will doubtless interest the readers of the Journal.

The Report is introduced by a very complete historical review of Excision of the Head of the Femur, more so in its details than has ever been published; bringing it, in its relation to gunshot injuries, down to the period of the Rebellion. Previous to the Crimean War six instances only had occurred in which this operation had been undertaken. It was performed six times during that war, and Dr. Otis notices the fact that the British surgeons, by whom alone it was practised, did not attempt the operation until the siege of Sebastopol being commenced, hospitals were established, and they had witnessed numerous unsuccessful hip-joint amputations.

At the time when Circular No. 6 (On the Nature and Extent of the Materials available for a Surgical History of the War) was published, but twenty-nine cases of excision of the head of the femur for gun-shot injury, occurring in our own military practice, had been registered. Since that period thirty-four other cases have been collected, making a total of sixty-three operations. Of these forty-eight were performed by Union and fifteen by Confederate surgeons. All cases where a possibility of duplication existed, or which from insufficiency in details were unfit for statistical purposes, having been sedulously rejected, and each individual instance of the operation being authenticated and given in detail, nothing hitherto published approaches in value or equals in interest this present contribution to the literature of excisions.

In an introductory letter to Surg.-Gen. Barnes, Dr. Otis alludes to the division of operations for gun-shot injury into primary, intermediate and secondary, and defends this classification from criticism; justly remarking, that "there is a wide difference in the results of operations performed immediately after the reception of the injury, those performed during the existence of inflammatory action, and those done after the symptomatic fever and inflammatory symptoms have abated."

Adopting the division above indicated, which ought not to require any argument for its vindication, the sixty-three American excisions are classified as follows, viz.:—thirty-two primary, twenty-two intermediate, and nine secondary.

Of thirty-two primary excisions, two were followed by recovery. In the thirty fatal cases, the mean duration of life after operation was seven days.

In twenty-two intermediate excisions, the interval between the injury and the operation ranged from two to twenty-eight days. Two were followed by recovery. In the twenty fatal cases the duration of life was twelve and a half days. One patient survived seventy-five days and another twenty days, both succumbing to malarial disease rather than the effects of either wound or operation. Three of the above cases were

attended by fracture of the pelvis, and would probably not have been operated on had this complication been detected in advance.

The number of injuries of the hip-joint which survive until the secondary period is reached must naturally be small. Only nine instances of excision during this stage are recorded, and of these one recovered. The interval between the injury and the operation varied from thirty-three days to nearly seven months (the successful case). One patient survived the operation one hundred days, the remainder less than a week.

Under the head of "unclassified and doubtful cases," a number of alleged instances of the operation are noticed, but they are so incomplete, or so imperfectly authenticated, that Dr. Otis rejects them and publishes their meagre details only in the hope of eliciting further information in regard to them. In this connection the opportunity is taken for a little sharp criticism of a paper by Dr. Paul F. Eve, in the Transactions of the American Medical Association for 1867, in which that writer attempted to collect the instances of excision of the head of the femur that occurred in the southern armies, viz., thirteen cases with five recoveries. The operation does not appear to have been frequently performed in the confederate service. Fifteen instances have, however, been gathered by Dr. Otis. This is two more than are enumerated in the paper of Dr. Eve, for of his thirteen cases Dr. Otis rejects eight (giving reasons for so doing), and four of his five alleged successes. The great mortality of this operation wherever performed hardly justifies, in view of these corrections by Dr. Otis, the statement of Dr. Good (late of the confederate army, and whose name is identified with the subject through the best monograph on excision of the hip for disease yet published), who, in a review of the paper of Dr. Eve (*Gaz. Heb.*, No. 42, 1868), observes that the fatal excisions of the hip in the Southern armies were "not the consequences of the operation but of the want of sufficient food and necessary comforts for the sick." These influences and the unfortunate necessity for transportation undoubtedly told upon the results, North as well as South, but were far less powerful than the combined effects of the injury and the operation.

In a chapter on the excisions performed since the war, eight intermediate operations, with one recovery, and one secondary operation, four months after injury, which proved fatal, are collected. These, added to the sixty-three previously tabulated, make a grand total of eighty-five operations, with eight recoveries.

But the most interesting, as it is the most novel, part of this report is the elaborate chapter on "Temporization in the Treatment of Gun-shot Injuries of the Hip." This, which is enlivened by a slight flavor of controversy, is designed to refute the assertions of "three modern writers on military surgery—Dr. Hermann Demme of Berne, Prof. N. Pirogoff and Dr. S. W. Gross," who "have taught latterly that the expectant plan of treatment of gun-shot injuries of the hip-joint is inadequately appreciated by surgeons, and have collected instances to prove that the commonly received opinion that such injuries are uniformly fatal when abandoned to the resources of nature is altogether fallacious."

The riches of the Registers of the Surgeon-General's office are unfolded in the mass of cases arranged for the conclusive refutal of the above opinion. Two hundred and seventy-four cases of gun-shot injury of the hip, with forty-nine examples of recovery, are analyzed, and the following deductions drawn:—"Among the one hundred and twenty-two cases of the first category—cases of alleged gun-shot injury of the hip-joint, with fracture of the head or neck of the femur—there were eight recoveries. The thirty-seven cases of the second category, complicated by injury to the acetabulum, all proved fatal. The five cases of slight injury to the acetabulum, in which the joint was opened but the femur uninjured, terminated fatally. In the series of twenty-two alleged examples of gun-shot wounds of the hip-joint, without direct lesion of the osseous articular surfaces, there were seven recoveries. In the category of twelve cases of secondary traumatic arthritis, five patients survived. Among the seventeen cases of gun-shot fractures of the trochanters, with possible primary injury to the joint, three recoveries are reported. Of the twelve cases of secondary involvement of the hip-joint, after fractures in the trochanters, two recovered. Finally, in a series of eighteen cases of alleged gun-shot fracture, involving the articulation and treated by the extraction of fragments, there were six recoveries."

But the careful scrutiny of these asserted recoveries leads Dr. Otis to the further conclusion that in the great majority of them the evidence of direct injury to the hip-joint is altogether inadequate. He says: "I am not satisfied by the evidence in any of the alleged examples of recovery, without operative interference, from gun-shot wounds involving the hip-joint,

reported by authors or recorded on the registers of this office. I continue to share the convictions of Guthrie and the elder authors as to the uniform fatality of such injuries when abandoned to the resources of nature. I am fortified in this opinion by the fact that, with the exception of Dr. Winne, none of the officers of the regular staff have ever observed an unequivocal instance of recovery under such circumstances; by the testimony also of a majority of the surgeons of the volunteer staff, and the concurrent testimony of a large number of those regimental surgeons who, as chiefs of divisions or of field hospitals, contributed so largely to the credit of American military surgery. Had it been impracticable to offer the conclusive evidence on the subject recorded in the preceding pages, I would have willingly opposed to the assertions of Drs. Pirogoff, Demme and Gross the convictions of this great body of experienced men, who have enjoyed unprecedented opportunities of observation, and who, with a solitary exception, aver that they have never seen a recovery from an undoubted gun-shot injury of the hip-joint treated on the expectant plan."

Since the publication of "Circular No. 7" on hip-joint amputations, twenty-two additional cases have been obtained. "Nine of these pertain to the surgery of the American war, and increase that list of operations from fifty-three to sixty-two; seven were cases of an earlier date, to be added to the one hundred and eight cited from previous sources, and six have been recently reported. Of the whole number—one hundred and eighty-three—but eighteen resulted in recovery."

The percentage of mortality in eighty-five cases of excision being 90·6 per cent.; in one hundred and eighty-three amputations, 90 per cent., and in one hundred and twenty-two cases treated on the expectant plan, 93·4 per cent., it might be "dogmatically concluded that operative interference was always indicated, and that amputation was preferable to excision." But Dr. Otis argues, with great propriety, that the question does not admit of a mere arithmetical solution; and while he utterly discards expectant treatment, the conclusions on which it has been defended being illusory, he maintains and shows by a careful and painstaking investigation that, except in a limited number of circumstances, excision affords a better chance of recovery than any other procedure; "eight recoveries in eighty-five excisions at the hip after gun-shot injury constitute an encouraging result, and are examples of the saving of life in an almost hopeless class of cases." Dr. Otis is of opinion that suffering is greatly diminished by the operation; but that if unsuccessful the duration of life is abbreviated by its performance. The "concluding observations," in which the relative merits of this operation, amputation and temporization are examined, is a very elaborate argument, bearing no marks of prejudice or uncandid treatment of a question, the merits of which the author makes as clear and conclusive to others as they evidently are to himself.

The report concludes with a few brief observations on the best methods of excising the head of the femur and of subsequent treatment. A straight incision and absolute rest and immobility of the limb, no matter how obtained, are the two conclusions reached in regard to these points.

As in preceding circulars, the illustrations in the present one are profuse, being seventy-one in number, besides four full-page portrait lithographs of patients whose excisions have been recovered from. These are all admirable as works of art; they contribute largely to the elucidation of the cases, and often enable the reader to arrive at an opinion independently of the author.

We conclude this analysis of Dr Otis's monograph with the expression of a feeling of pride at the manner in which the duty has been executed, and with a reiteration of the impression that it is the most important as well as the most complete of the entire series of Surgical Reports which have emanated from the pen of this accomplished officer.

The following tabular view presents a recapitulation of the comparative mortality of amputation and excision of the head of the femur.

Amputations.	*Cases.*	*Died.*	*Recovered.*	*Doubtful.*	*Death-rate*
Primary	79	75	1	3	98·68
Intermediate	76	70	6		92·10
Secondary	20	13	7		65
Reamputations	8	4	4		50
Aggregate	183	162	18	3	90*

Excisions.	*Cases.*	*Died.*	*Recovered.*	*Death-rate.*
Primary	39	36	3	92·3
Intermediate	33	30	3	90·9
Secondary	13	11	2	84·6
Aggregate	85	77	8	90·6

* The doubtful cases are omitted in computing the percentages.

R. M. H.

Medical and Surgical Journal.

Boston: Thursday, August 5, 1869.

NOTES FROM FRENCH JOURNALS.

The Seat of Intelligence—the Primordial Cell.—M. Amédée Latour, in his fine introduction to the *Dictionnaire Annuel, &c.*, for 1868, makes certain remarks which we here translate.

The most delicate and penetrating investigations of the microscope, of the scalpel, and of chemistry transfer certain problems without solving them. Whether you place the seat of intelligence in the encephalon as a whole, or only in the anterior lobes of the brain; or confine it to certain convolutions, to such or such a part of the gray substance, or finally to this or that cerebral cell, the problem of thought retreats, but is still a problem. The sphynx preserves always her silence, whether you interrogate her with the point of your finest needle on the *porte-objet* of your most powerful microscope, or by the closest analysis of the most searching chemistry.

And that cell, the pivot to-day not only of philosophy, but also of medical doctrine—whether you assume it to be born of a blastema or of the proliferation of an antecedent cell—from the moment that you recognize it to be living, and discern in it properties which the dead cell does not possess, you behold the impenetrable problem of life retire within its extreme limits, but still preserving its mystery. Make for us a man complete in all parts! was wont to be demanded of the iatro-chemists and mechanicians. Manufacture a *homunculus!* was once the importunate cry. To-day we may content ourselves with demanding that a single living cell be made by human power, and, that done, we will believe in the legitimacy of your objurgations against the *vitalism* which now offends you, and which rises as an impassable barrier to your ambitious pretensions..

Yet one of the most zealous adepts of the school of Robin, Doctor Onimus, has announced that he has produced leucocytes [the everlasting "what is it"—the pus or mucous globule] completely formed, by inserting under the skin of a living rabbit the serum from a blister enclosed in a sac of goldbeater's skin. But, his experiments have been the subject of serious objections. Repeated by Doctor Lortet they have received quite another interpretation in the hands of this new experimenter. According to him either the *leucocytes* pre-existed in a state of extreme tenuity in the blister serum which is one of their usual habitats, or they had passed from the animal into the serosity by osmosis. When a fact of such importance lends itself to interpretations so different from each other, it is not wise to admit that one which stands at the greatest distance from the principles of natural philosophy.

Researches on the internal structure of the Pancreas, by M. Giannuzzi.—We find in the *Gazette Hebdomadaire, &c.* a brief passage from the monograph of Giannuzzi. The excretory canals of the pancreas, he says, have very thin walls, which are lined with cylindrical epithelium. They have not the same connection with the secretory vesicles which the excretory canals of the salivary glands have with the secretory vesicles there, but they form around them a net-work composed of very minute tubes, which tubes are devoid of epithelium, and enclose in their meshes the pancreatic cells. This net-work is comparable to that of biliary ducts.

The net-work of excretory canals in the different vesicles which form the same glandular lobule have connections *inter se*, and constitute a common net-work.

The terminal ramifications of the blood-vessels generally follow the course of the pancreatic ducts.

The pancreatic vesicles have no wall. Their pavement epithelium is formed of flattened cells having nuclei and prolongations.

The following items are from the *Union Médicale.*

The cold weather of the month of June last said to be caused by spots on the Sun.—Among the causes to which may be attributed the cold weather which prevailed in the month of June, Astronomy claims to furnish one, which is related for what it is

worth. Upon the disc of the sun are constantly found spots having the effect of veritable screens, * * * * and as the number and dimensions of these screens vary without cessation, the heat which we receive varies likewise, but in inverse proportion. On this head, Secchi, the celebrated Roman Astronomer, writes in the *Giornale di Roma*, that the sun finds itself at present in an epoch of very numerous spots. In the morning of June 7th, there were counted thirty-three principal ones, disposed in seven or eight groups, their number rapidly increasing to the maximum. The whole sun was in reality covered. It appeared several times as a mass of white flakes on a ground-work of glowing embers.

A certain degree of importance attaches itself to the observation of the eminent astronomer in that he adds that the variations of the solar spots appear confined to a period which is all but triennial. According to this, there is ground for hope that astronomy, by establishing the law of the variations of the solar spots, may furnish valuable data for the prediction of variations in temperature and in the course of the seasons.

Cholera.—There is news from Senegal to the effect that the cholera is making great ravages along the borders of the River Gambia and at Sainte-Marie de Bathurst.

Consanguineous Marriages. — A short time since we gave an extract, which was to the effect that the marriage of blood-relations was not productive of defective offspring except in so far as it involved the ordinary laws of heredity. We learn, however, through the *Gazette Hebdomadaire*, that Dr. Mitchell, in a treatise which we have not seen, takes the other view heretofore entertained by many. In this work, which the *Gazette* pronounces very interesting and very "conscientiously" prepared, the author has studied the question upon small isolated groups of population, inhabiting either little islands or villages upon the shore of the North of Scotland. He has endeavored, on the other hand, to ascertain how many idiots and how many insane inmates of asylums were the issue of consanguineous marriages. From these inquiries the author, we are told, infers that such marriages are objectionable, on the basis of numerous and convincing facts.

The Thrombus in the Ligature.—The part which the clot plays in the obliteration of arteries subjected to ligature has, in spite of multiplied researches, says the *Gazette Hebdomadaire*, remained a subject of controversy, to which histological investigations have given a new interest. The observations of Weber have brought up again former discussions on the organization of the blood. The problem has changed ground, however, in the direction of the assumption that organization was due to the white globules and not to the fibrin. The partizans of the opinion set forth by Weber and Billroth, though not numerous, bring to the debate a conviction so profound that it becomes necessary to enlarge the field of experiment.

Dr. Tschansoff has undertaken a long series of experiments, the results of which are not vague, and which demand attention. The author has examined the results of 36 ligatures upon arteries or veins, and has been able to follow out the diverse phases of the obliteration of the arteries. His work is summed up in the following conclusions:—The thrombus does not become organized. The white corpuscle, the red globule and also the fibrin present profound modifications. The white corpuscles lose their color and become filled with granulations; they are themselves reduced to the condition of granules. The fibrin undergoes molecular destruction, or in rare cases fatty metamorphosis. This destruction proceeds *pari passu* with the organization of the vascular walls. The clot performs no other part than to prevent secondary hæmorrhage. The formation of vessels in certain parts of the thrombus has for its point of departure the vascular wall. The thrombus and the ligature favor their development by irritation. The general state of the system and also local conditions influence the production of organization and the length of time consumed in its completion. The epithelial coat and the muscular fibres of the middle coat do not share in the process of organization. * * *

The reappearance of the cavity takes

place in an irregular manner. The tissue of new formation, whether within the walls or about the new orifice, presents an abundant vascularity. The vessels penetrate through the walls and open into the new cavity, whether this have been formed entirely or only in part. Their development takes place along with the formation of the young tissues. The presence of canals in the tissue around the orifice cannot be doubted. The current of blood is re-established through the wall without the participation of the canals.

The view that there is organization of exudations, of sanguineous effusions, of hæmatomata, of white corpuscles in the clots, * * * * is not established on a solid foundation.

The *Gazette* has obtained the foregoing account from a German journal.

We call special attention to the article on "Sweet Quinine" in this number. We print it as a selected paper at the suggestion of one of our most eminent physicians, who has written to Prof. Procter to thank him, on behalf of the profession, for his able statement and for the noble stand he has taken. The independence and loyalty to principle of Prof. Procter are the more conspicuous from the fact that he has been a personal friend of the vender of the preparation in question, and that both have held prominent office in the American Pharmaceutical Association. Such a course of action must tend toward the development among the pharmacists of an *esprit de corps* of the most desirable character.

Mr. Editor,—In the *Chicago Medical Examiner* for July, 1869, p. 407, in a "report of the nineteenth Annual Meeting of the Illinois State Medical Society, commencing May 18, 1869, in the City of Chicago"; on Thursday morning, the third day, in a general discussion on Chloroform and Ether, there occurs the following paragraph:—

"Dr. E. Powell stated the fact that a few years since he saw the Ether administered to a patient in the Hospital at Boston, Massachusetts, who died directly from the effects of the inhalation."

If by the Hospital at Boston, Massachusetts, is meant the Massachusetts General Hospital, the undersigned, comprising all the past and present surgeons of that Institution, now living (with the exception of Dr. H. J. Bigelow, who is temporarily absent from the city), desire to say, that no patient ever died from the inhalation of Ether in that Hospital, nor are they cognizant of any such occurrence in Boston or elsewhere.

S. D. Townsend, *late Surgeon M. G. H.*
Henry G. Clark,
Samuel Cabot,
Geo. H. Gay,
R. M. Hodges,
Algernon Coolidge,
} *Attending Surgeons.*
Benj. S. Shaw, *Resident Physician.*

Boston, July 29, 1869.

Dr. George W. Swett.—The daily papers announce the death of this estimable young man, at Bonn, on the 27th inst. Dr. S. received his medical degree here a year ago, and immediately went to Europe to continue his studies. He passed last winter in Vienna, and had very recently left Berlin for a tour in Switzerland, when he was attacked with diphtheria and died in a few days. His friend, Dr. Henry Bowditch, happened, fortunately, to be in Bonn at the time, and from him he must have received every possible attention. The former classmates of Dr. S. in College, his fellow-students in the Medical School, and all, in fact, who knew him, will remember the great purity of his character, his quiet and uniformly gentlemanly manners, his self possession, and the prudence that led him never to speak ill of anyone, either directly or by insinuation. He had been devotedly attentive to his profession since he commenced his studies, and would have been an ornament to it if he had lived. Dr. S. had, also, refined and cultivated tastes; and, being well acquainted with the botany of this neighborhood, he had been in the habit since he had been in Europe of making excursions into the country for the pursuit of his favorite study, wherever he might be, and whenever his medical studies would allow him a few leisure hours. He also highly enjoyed the galleries of art that he visited in Germany and Italy. His character was a beautiful one, and the loss of him, as an only son, must be to his parents irreparable.

Certain letter envelopes, the interior of which are colored a bright green, are so colored by means of arsenite of copper. Each of these envelopes is said to contain about 25 milligrammes of this salt.

Medical Miscellany.

PRESCRIPTION AND CLINIC RECORD.—"*Its Object.* 1. To give more precision and certainty to prescriptions by writing them twice—once for keeping, and once for the apothecary. 2. To substitute, more and more, positivism for conjecture in diagnosis and prognosis. 3. To record phenomena on the spot and keep their series in sight. 4. To treat complex or protracted cases with scientific unity of plan. 5. To enable a physician to continue, with perfect knowledge, the treatment of the case of a *confrère*, absent or sick. 6. To keep physicians posted on the use of improved instruments of medical diagnosis, as surgeons generally are in regard to those of their art. 7. To enfranchise the physician from carrying papers headed with the name of some enterprising druggist, as if the former was subservient to the latter; or from writing his prescriptions on begged scraps of paper.

"*Its Use.* A. The three great vital signs—heat, respiration, pulse-beat—have to be recorded at least once in every case, because their concordance or discordance may reveal danger where none could otherwise be suspected, or treachery where disease is simulated. B. The diagram of two cases of pneumonia, reported from the New York Hospital, and from the wards of Dr. W. H. Draper, as early as May, 1866, will serve as specimens to fill up the following blank ones in private practice. C. The sphygmograph is described and its application explained. D. The necessity of early testing obscure anomalies of contractility by the various modes of investigation offered by dynamometry. E. Æthesiometry is likewise illustrated. F. Mensuration in its varied forms is insisted upon. G. The tables of observation to be filled during the use of electricity, strychnine, ergot, &c., will evidence the march of nervous affections, otherwise so obscure."

Published by Wm. Wood, 61 Walker St., New York.

This little pamphlet collection of leaves, about four inches wide by eight long, hardly affords "sea-room" enough for a complete record of cases, but must be of great service in keeping the record of patients with chronic diseases, to whom, or from whom, visits are few and far between.

COMMONWEALTH OF MASSACHUSETTS. *Secretary's Office, Boston.*—His Excellency the Governor, with the advice of the Council, has appointed Henry K. Oliver, of Salem, chief of the Bureau of Statistics on the subject of labor; Dr. Henry I. Bowditch, Dr. George Derby and Warren Sawyer, Esq., respectively of Boston, Robert L. Davis, Esq., of Fall River, Hon. Richard Frothingham, Jr., of Charlestown, Hon. P. Emory Aldrich, of Worcester, and William C. Chapin, Esq., of Lawrence, members of the State Board of Health and Vital Statistics.—*Advertiser.*

DR. J. G. DEARBORN has been appointed physician to the Massachusetts State Prison, in place of Dr. Bancroft, who has been selected to take the medical charge of the Chelsea Hospital.

EMENDATION.—An extract from the Dublin *Medical Press and Circular* in our last was, as printed, "correct by copy." But the name "Bonchut," we presume, should read *Bouchut*; and the word "mystitis," *myelitis.*

JAMES YEARSLEY, M.D., M.R.C.S.—James Yearsley died on the 9th of July at his residence, in Saville-row, of cancer of the liver, at the age of 64. He was born at Cheltenham, and became a pupil of Mr. Fletcher, of Gloucester, one of whose daughters he married. He passed his examination at the College and Hall in 1827, and subsequently took the degree of M.D. at St. Andrews in 1862.

LONDON CHARITIES.—The Bishop of London states that there now exist in London more than a thousand associations for charitable purposes, administering annually about £4,000,000, in addition to the regular assessment of the poor-rates. Yet there is such a spread of want, misery, pauperism and crime in that metropolis that the authorities are at their wits' end to meet it.—*New York Medical Record.*

MEDICAL DIARY OF THE WEEK.

MONDAY, 9, A.M., Massachusetts General Hospital, Med. Clinic. 9, A.M., City Hospital, Ophthalmic Clinic.
TUESDAY, 9, A.M., City Hospital, Medical Clinic, 10, A.M., Surgical Lecture. 9 to 11, A.M., Boston Dispensary. 9–11, A.M., Massachusetts Eye and Ear Infirmary.
WEDNESDAY, 10, A.M., Massachusetts General Hospital, Surgical Visit. 11 A.M., OPERATIONS.
THURSDAY, 9 A.M., Massachusetts General Hospital, Medical Clinic. 10, A.M., Surgical Lecture.
FRIDAY, 9, A.M., City Hospital, Ophthalmic Clinic; 10, A.M., Surgical Visit; 11, A.M., OPERATIONS. 9 to 11, A.M., Boston Dispensary.
SATURDAY, 10, A.M., Massachusetts General Hospital Surgical Visit; 11, A.M., OPERATIONS.

TO CORRESPONDENTS.—Hereafter we shall mention the receipt of those articles only which are *accepted.*

Communications accepted:—Subcutaneous Injection of Corrosive Sublimate in Syphilis.—Penetrating Wound of Female Genito-urinary Organs.—Diagnosis of Lesions of the Base of the Brain.

PAMPHLETS RECEIVED.—On the Treatment of Uterine Catarrh. By Joseph Kammerer, M.D., Physician to the German Hospital and Dispensary, New York.—Circular No. 2. War Department, Surgeon-General's Office, Washington. Report on Excisions of the Head of the Femur for Gun-shot Injury.

DEATHS IN BOSTON for the week ending July 31, 196. Males, 102—Females, 94.—Accident, 3—anæmia, 1—apoplexy, 3—disease of the bowels, 1—inflammation of the bowels, 1—congestion of the brain, 3—disease of the brain, 6—inflammation of the brain, 1—cancer, 5—cholera infantum, 76—consumption, 22—convulsions, 3—croup, 1—debility, 2—diarrhœa, 4—diphtheria, 2—dropsy, 1—dropsy of the brain, 2—dysentery, 11—scarlet fever, 2—typhoid fever, 2—fistula in ano, 1—disease of the heart, 1—infantile disease, 2—intemperance, 3—inflammation of the lungs, 4—marasmus, 11—measles, 1—necrosis, 1—neglect, 1—old age, 2—paralysis, 1—peritonitis, 3—premature birth, 2—puerperal disease, 2—rheumatism, 3—scalded, 1—syphilis, 1—unknown, 1—whooping cough, 3.

Under 5 years of age, 122—between 5 and 20 years, 12—between 20 and 40 years, 24—between 40 and 60 years, 20—above 60 years, 18. Born in the United States, 149—Ireland, 36—other places, 11.